UNITED STATES OF AMERICA

FEDERAL COMMUNICATIONS COMMISSION

TECHNOLOGICAL ADVISORY COUNCIL MEETING

THURSDAY, SEPTEMBER 15, 2022

The advisory committee met via video teleconference, at 10:00AM Eastern time, Dean Brenner, Chair, presiding.

COMMITTEE MEMBERS PRESENT:

First Name	Last Name	Company Representing
Shahid	Ahmed	NTT LTD
Mark	Bayliss	Virginia ISP Association and Visual Link Internet
Nomi	Bergman	Advance Newhouse Communications
Dean	Brenner	SGE
Ranveer	Chandra	Microsoft
Bill	Check	NCTA
Lynn	Claudy	NAB
Andrew	Clegg	Wireless Innovation Forum
Alissa	Cooper	Cisco Systems
Brian	Daly	AT&T
Adam	Drobot	OpenTechWorks
Jeff	Foerster	Intel Corporation
Peter	Gammel	GlobalFoundries
Monisha	Ghosh	The Wireless Institute, University of Norte Dame
Abhimanyu	Gosain	Northeastern University
Dick	Green	Liberty Global, Inc
Lisa	Guess	Ericsson North America
Dale	Hatfield	TCP, Univ of Colorado at Boulder
Manish	Jindal	Charter Communications
Steve	Lanning	Viasat, Inc
Gregory	Lapin	American Radio Relay League
Kaniz	Mahdi	Deutsche Telekom
Dan	Mansergh	Apple
Brian	Markwalter	Consumer Technology Association
Lynn	Merrill	NTCA
Amit	Mukhopadhyah	Nokia
Jack	Nasielski	Qualcomm, Inc.
Michael	Nawrocki	ATIS
Roger	Nicols	KeySight

Madeleine	Noland	ATSC
Vikram	Raval	AST SpaceMobile
Tom	Sawanabori	CTIA
Henning	Schulzrinne	SGE
Marvin	Sirbu	SGE
Ted	Solomon	NRTC
Paul	Steinberg	Motorola
Rikin	Thakker	Wireless Infrastructure Association
Michelle	Thompson	Open Research Institute
Doug	Brake	NTIA

Bejoy	Pankajakshan	
John	Peha	

COMMISSION STAFF PRESENT:

First Name	Last Name	Title
Ronald	Repasi	Chief, Office of Engineering and Technology
Michael	Ha	Designated Federal Officer
Martin	Doczkat	Deputy Designated Federal Officer

SUMMARY:

The advisory committee meeting began at 10:00AM Eastern time, with welcome remarks from the Technological Advisory Council (TAC) Chair, Dean Brenner, who reported that the TAC has progressed its work in the current working group (WG) focus areas: 6G, Emerging Technologies, Artificial Intelligence/Machine Learning (AI/ML), and Advanced Spectrum Sharing. The TAC Chair expressed his support for the FCC Chair Jessica Rosenworcel's decision to instantiate 6G, that it's not too early to begin planning for the future of wireless networks, and emphasized the importance of the activities of the other WGs as well.

The TAC Chair's remarks were followed by welcome remarks from OET Chief Ronald Repasi, highlighting the synergy and interconnections between the WGs and volunteers, and looking forward to the actionable recommendations by the end of the calendar year.

The OET Chief's remarks were followed by welcoming remarks from the DFO Michael Ha and Deputy DFO Martin Doczkat, acknowledging the fantastic work by the WGs, noting various Commission activities with overlapping interest to the TAC, including the receiver Notice of Inquiry, an offshore Notice of Inquiry, FCC/NTIA Memorandum of Understanding, and an upcoming Orbital Debris Second Report and Order, and reintroducing a member, Kaniz Mahdi, who now represents Deutsche Telekom on the TAC.

The Advanced Spectrum Sharing WG Chairs, Monisha Ghosh and Andy Clegg, covered the following topics: identify potential new spectrum bands for sharing, establish best practices for spectrum sharing, survey of technological advances potentially improving receiver standards, develop models of potential harmful interference, and identify economic incentives of shared spectrum. Working toward actionable

recommendations, the WG will be considering how specific bands might be contemplated as "low-hanging fruit" for spectrum sharing, in terms of the key topic areas (interference modeling, economic incentives, receiver standards, technology enablers). Discussion among TAC members after the presentation included questions surrounding the sustainability of having a volunteer WG identify potential spectrum bands for sharing versus this being principally a government function, and noting that filter technology and receiver standards may have a significant impact on how spectrum may be allocated, especially above about 6 GHz.

The 6G Working Group (WG) Chairs, Brian Daly and Manu Gosain, summarized their progress so far, looking into areas which could lead to potential recommendations and/or advisements, including the timeline of 6G standardization in the technical standards bodies (ITU, ETSI, 3GPP, etc.), Open Radio Access Networks (Open RAN) and security, spectrum bands and spectrum needs for 6G use cases and application verticals. The WG Chairs summarized the presentations given to the WG on various topics throughout the year, and presented a deep dive on the status of standards being developed such as 3GPP 5G Advanced and O-RAN Alliance. The WG Chairs touched on how 6G may enable opportunities for enhanced connectivity in remote areas to close the digital divide. The WG Chairs identified potential focus areas for the next calendar year, including 5G Advanced evolution toward 6G, 6G research and standards progress, World Radio Conference 2023, and use cases and applications (autonomous driving, edge computing, emergency alerting, and smart city technology).

The AI/ML WG Chairs, Lisa Guess and Adam Drobot, provided a summary survey of the state of the areas of AI/ML and computing, including describing the typical methods for implementing an AI/ML model. The WG Chairs detailed the impacts of AI/ML and computing technologies on telecommunications network operations, services, and applications, ranging from near-real time to non-real time, and from the core to the edge of the network. The WG Chairs continued to explore the prospect of pilot projects for the FCC to leverage and make the best use of AI/ML tools internally, such as the development of a system model for automated network management and control to facilitate spectrum sharing at a more granular level than current models. The WG Chairs summarized the WG's progress on developing notional actionable recommendations, supporting the Commission's high-level goals, and maintaining leadership in the telecommunications sector.

The Emerging Technologies WG Chairs, Brian Markwalter and Henning Schulzrinne, noted the progress of the WG that, despite a charter that covers a wide range of technologies, so far has uncovered few potentially actionable recommendations to provide to the FCC. The WG continues to consider the impact of emerging technologies with regard to their impact on efficient use of spectrum, universal broadband deployment, network resilience and reliability, new IoT applications and availability, accessibility, emergency calling, and location positioning. The WG Chairs listed the invited subject matter experts who have presented to the WG, and provided a status update that their WG intends to focus on possible gaps in coverage of topics defined in the WG charter, and to deepen the WG knowledge on some topics, working toward considering how actionable recommendations in these focus areas would be crafted by the end of the year.

The advisory committee meeting adjourned at 2:45PM Eastern time.

VIDEO LINK: https://www.fcc.gov/news-events/events/2022/09/technological-advisory-council-meeting-september-15-2022

AGENDA:

10:00am – 10:30am	Introduction and Opening Remarks • Welcome Message (TAC Chair) • Opening Remarks by OET Chief • DFO/Deputy DFO Remarks • Member Introduction/Roll Call
10:30am – 11:15am	Advanced Spectrum Sharing WG Presentation
11:15am – 12:00am	6G WG Presentation
12:00pm – 1:00pm	Lunch Break
1:00pm – 1:45pm	AI/ML WG Presentation
1:45pm – 2:30pm	Emerging Technologies WG Presentation
2:30pm – 2:45pm	Closing Remarks
2:45pm	Adjourned

SIGNED, COMMITTEE CHAIR

Dean Brenner

11/16/22

Date